

Name \_\_\_\_\_ Hour \_\_\_\_\_

### **Traits**

1. A **trait** is:
2. As we talk about each trait, fill out the table by writing YOUR phenotype.

<b>Trait</b>	<b>My Phenotype</b>
Dimples	
Thumb Dominance	
Tongue Rolling	
Toe Order	
Hitchhiker's Thumb	
Finger Spread	
Earlobes	
Freckles	

3. Were you able to find a partner? Yes or No
  - a. If so:
    - i. What other traits do you have in common?
    - ii. What are some traits that you do not share?
    - iii. Why are you not exactly the same as this person?
  - b. If not:
    - i. What was the closest you got to finding a partner (how many traits did you share out of 8)?
    - ii. Why was it difficult to find someone with the exact same traits?
    - iii. Where would you look to find someone who shared all of these traits?

Answer the following questions as your teacher guides you through the "Tour of the Basics" website.

**Section: What is DNA?**

4. Where are instructions found in the cell?
5. Is DNA an atom or molecule?
6. What does DNA stand for?
7. What are the 4 letters used in the DNA alphabet?
8. Which letters bind together?
9. What do genes do?

**Section: What is a Gene?**

10. What is a gene?
11. What are genes made of?
12. How many genes do humans have?
13. Give an example of 2 proteins that are produced by genes.

**Section: What is a Chromosome?**

14. What is a chromosome?
15. How many chromosomes does a human cell hold?
16. How do we label sex chromosomes?
17. How many chromosomes does a carp have?

**Section: What is heredity?**

18. What is heredity?
19. Why aren't children identical to either one of their parents?
20. In humans, how many chromosomes does each parent pass on to their offspring?

21. How many chromosomes does the egg cell have?                      Sperm cell?
22. How many chromosomes does a zygote (cell made by sperm and egg) have?
23. Does the second baby in the simulation have the same chromosomes as the first? Why?

**Section: What is a trait?**

24. What is a trait?
25. What are the 3 types of traits that exist? Give an example of each.

Type of trait	Example

26. Give an example of how an environmental factor can influence a trait.
27. What is an allele?
28. For the hitchhiker's thumb trait:
- Those with HH will have what kind of trait?
  - Those with hh will have what kind of trait?
  - Those with Hh will have what kind of trait?
29. What is the difference between dominant and recessive alleles?
30. What does heterozygous mean?

**Add each of these words to your vocabulary chart along with a definition.**

DNA, Gene, Allele, Chromosome, Cell, Trait